

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

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**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

	Date of mailing (day/month/year) <b>25 -05- 2005</b>	
Applicant's or agent's file reference <b>2031956PC/nu</b>	<b>FOR FURTHER ACTION</b> See paragraph 2 below	
International application No. <b>PCT/FI2005/050045</b>	International filing date (day/month/year) <b>22.02.2005</b>	Priority date (day/month/year) <b>23.02.2004</b>
International Patent Classification (IPC) or both national classification and IPC <b>B25D 9/12</b>		
Applicant <b>Sandvik Tamrock Oy et al</b>		

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further opinions, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/FI2005/050045

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

This opinion has been established on the basis of a translation from the original language into the following language, \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

a sequence listing  
 table(s) related to the sequence listing

b. format of material

in written format  
 in computer readable form

c. time of filing/furnishing

contained in the international application as filed.  
 filed together with the international application in computer readable form.  
 furnished subsequently to this Authority for the purposes of search.

3.  In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-5	YES
	Claims		NO
Inventive step (IS)	Claims	1-5	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-5	YES
	Claims		NO

2. Citations and explanations:

The claimed invention

The claimed invention relates to a pressure-fluid-operated percussion device comprising a frame allowing a tool to be arranged therein movably in its longitudinal direction, means for feeding pressure liquid to the percussion device and for returning pressure liquid to a pressure liquid tank, and means for producing a stress pulse in the tool by utilizing pressure of the pressure liquid. The invention includes a pressure liquid source for maintaining pressure in the working pressure chamber, and means for intermittently feeding pressure liquid to the percussion device such that the pressure liquid pushes a transmission piston into a predetermined backward position such that pressure liquid is discharged from the working pressure chamber, and for alternately allowing pressure liquid to be discharged rapidly from the percussion device so that the pressure of the pressure liquid in the working pressure chamber and pressure liquid flowing thereto from the pressure liquid source pushes the transmission piston towards the tool, thus generating a stress pulse in the tool.

The following documents have been cited in the International Search Report

D1: WO 03/004822 A1  
D2: US 4 159 039 A

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

The documents cited in the International Search Report represent the prior art. The claimed invention stated in claims 1-5 is not considered to be anticipated by these documents. None of the documents or any relevant combination of them reveals a pressure-fluid-operated percussion device as described by these claims.

According to the arguments stated above, the invention claimed in claims 1-5 is novel, considered to involve an inventive step and has industrial applicability.